

GE Energy

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GE WattStation™ Pedestal EVSE Charger

Installation Manual



imagination at work

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1 Publications

Reference Documents

Ref. No.	Title
DEH -41580	WattStation™ Pedestal User Manual
DEH -41581	WattStation™ Pedestal MODBUS Register Mapping Guide

2 Introduction

GE wishes to thank you for choosing our EVSE (Electric Vehicle Supply Equipment) product. We are committed to being the world's leading supplier of EV chargers by providing the highest quality products as well as the best documentation and product support available in the industry.

Compiled in this manual is a comprehensive set of documentation for your purchase. The manual is designed to provide you installation, commissioning, preventative maintenance, trouble-shooting and proper operating instructions for your GE Pedestal WattStation™ EV charger unit. We suggest complete review of the manual by your personnel prior to installation and subsequent operation of the product.

Before proceeding to the instructions note that in this manual are several warnings, cautions and notes which are highlighted in bold letters. Please take time to read these special instructions because they contain important information regarding protection and safety of personnel and equipment.



WARNING: Denotes operating procedures and practices that may result in personal injury or loss of life if not correctly followed



CAUTION: Denotes operating procedures and practices that, if not strictly observed, may result in damage to, or destruction of equipment.

NOTE: Notes call attention to information that is especially significant in understanding and operating the equipment.

3 Important Safety Instructions

3.1 Safety and Compliance



-Read all the instructions before using this product.

-This device should be supervised when used around children.

-Do not put fingers into the electric vehicle connector.

-Do not use this product if the flexible power cord or EV cable are frayed, have broken insulation, or any other signs of damage.

-Do not use this product if the enclosure or the EV connector is broken, cracked, open, or show any other indication of damage.

-This document provides instructions for installation of WattStation™ Pedestal EV

Charging Station and should not be used for any other product. Before installing the EVSE (Electric Vehicle Supply Equipment), you should review this manual carefully and consult with a licensed contractor, licensed electrician, or trained installation expert to ensure compliance with local building codes, climate conditions, safety standards and state and local electrical codes.

-The EVSE should be installed only by a licensed contractor, and/or a licensed electrician in accordance with all applicable state, local and national electrical codes and standards. The EVSE should be inspected by a qualified installer prior to initial use. Under no circumstances will compliance with the information in this manual relieve the user of his/her responsibility to comply with all applicable codes or safety standards.

-To reduce the risk of fire, replace only with same type and rating of fuse.

-Risk Of Explosion: This equipment has internal arcing or sparking parts, which should not be exposed to flammable vapors. It should not be located in a recessed area or below floor level.



- This device is intended only for charging vehicles not requiring ventilation during charging
- To reduce the risk of electric shock, connect only to properly grounded outlets

- Do not use this product if there is any damage to the flexible power cord or the EV cable
- Risk of electric shock. Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service person.

3.2 FCC Requirements

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Important: Changes or modifications to this product not authorized by

GE Energy could affect the EMC compliance and revoke your authority to operate this product.

Exposure to Radio Frequency Energy: The radiated power output of the optional IEEE 802.11b/g wireless radio and optional cellular modem in this device are below the FCC radio frequency exposure limits for uncontrolled equipment. This device should be operated with a minimum distance of at least 20 cm between the IEEE 802.11b/g wireless and Cellular antennas and a person's body and must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

4 Grounding Instructions

The EVSE must be connected to a centrally grounded system. The ground conductor entering the EVSE must be connected to the equipment grounding lug inside the charger. This should be run with circuit conductors and connected to the equipment grounding bar or lead on the EVSE. Connections to the EVSE are the responsibility of the installer and purchaser, not GE and must comply with all applicable electrical codes and ordinances.

5 Installation Instruction

5.1 Before Installing

Before any installation work is performed, study all drawings and instructions furnished by the supplier for the particular installation.

These include arrangement drawings (front, end, and plan views), connections to the equipment that may be required to meet any local codes (such as mats, screens, or railings) is not furnished.

5.2 Safety Requirements

- Eye protection with appropriate safety glasses.
- In the installation, be sure to not connect directly to power distribution network cables without additional protection.
- When installing or performing maintenance on EVSE, ensure EVSE is not powered.
- Use appropriate tools for each function.

5.3 Installation Overview and Specifications

This document provides step-by-step instructions for installing the WattStation Pedestal EV Charging Station.

Ensure that the EVSE is installed per Americans with Disabilities Act (ADA) Standards for Accessible Design guidelines, refer to code of federal regulations document 28 CFR Part 36, sections 4.2 (Space Allowance and Reach Ranges) and 4.4 (Protruding Objects).

Make sure that the EVSE unit is installed in an area where it has adequate Verizon 3G coverage at the user site when using the cellular option on the charger.

Shaded installations are recommended for areas subject to temperatures approaching 50C (122F) and high solar radiation (7.5 kWh/m²/day). Direct exposure under these conditions could affect long term life of the unit.

6 Installation Requirements



WattStation should be installed only by a licensed contractor, and/or a licensed electrician in accordance with all applicable state, local and national electrical codes and standards.

- Ensure that a dedicated circuit, capable of supplying 30A at 208-240 VAC, is available
- A recommended 40A upstream circuit breaker, located either in a panel board or load center, should be used.
- GE WattStation EVSE unit has built in GFCI protection; do not provide any additional GFCI protection upstream of the EVSE.

7 Torque Specification Table

SCREW SIZE	TORQUE	TORQUE TOL.
PDB – Power Distribution Block for Field Wiring	40 in-lb	+/- 2 in-lb
Ground lug	45 in-lb	+/- 2 in-lb
Roller –M5x12, Cup Point set screw	18 in-lb	+/- 2 in-lb
Brush – T-15 Driver size (Tamperproof Head)	23 in-lb	+/- 2 in-lb
Brush bracket – M5 Hex Head	23 in-lb	+/- 2 in-lb
Bellows bracket top – M5 Philips Head	23 in-lb	+/- 2 in-lb
Bellows bracket bottom – M5 Philips Head	23 in-lb	+/- 2 in-lb
Bellows plate – M3 Nut	18 in-lb	+/- 2 in-lb
Wire trays top – M5 Hex Head	23 in-lb	+/- 2 in-lb
Wire trays bottom– M5 Hex Head	23 in-lb	+/- 2 in-lb
Anchoring bolts – ½” x 6” Hex Head	20 in-lb	+/- 2 in-lb

Table 1

8 Installation and Maintenance Tools

8.1 Installation Tools

Type	Characteristics
Slotted Screwdriver	3/16" or ¼"
Socket/Ratchet	Socket sizes: M5
Electric Hammer Drill	
Wire stripper, hammer, wrench and anchor bolts*	

Table 2

* Use 1/2" x 6" Hexagonal Sleeve Anchor bolts

8.2 Maintenance tools

Type	Characteristics
Slotted Screwdriver	3/16" or ¼"
Drill Bit	T-15
Socket/Ratchet	Socket sizes: M3, M5

Table 3

9 Field cable size



WARNING: Make sure power to the EVSE is disconnected before performing any task

Power wires:

Cu: 8 AWG, minimum 75 ° C wires

Ground wires

Cu: 8 AWG, minimum 75 ° C wires

Communication wires

CAT5 Ethernet cable

10 Installation Procedure

Step 1: Carefully unwrap the packaging and make sure the following items are present:

- WattStation Pedestal EVSE unit
- Key for WattStation access door
- Installation Manual
- MODBUS Guide
- Provisioning card
- Mounting Template

Step 2: When removing the EVSE from the packaging, do not lift the EVSE by the plastic top assembly. When the EVSE needs to be lifted, remove the access door and disconnect the ground connection on the door. Grip EVSE on the door opening of the shell and/or EV cable exit on front of shell. After EVSE has been placed in its desired location, reconnect the ground connection on door and close the access door.

Step 3: Check for any damage to the unit, cord and connector.

If no damage is noticed, proceed to next step,

If damage is noticed, call 1-888-GE-RESOLVE.

Step 4: Locate area (concrete pad/ floor) for EVSE unit

Step 5: Install two conduits, one for power (minimum 1" Conduit), and one for communication (minimum 3/4" Conduit). Both Conduits should fit Within a 4.75" diameter.

Allow approximately 4" length for each conduit above the concrete level as shown in Figure 1. Cut as necessary to final dimensions. Route power conduit and communication conduit through the center of the concrete bed, appropriately. Make sure that, concrete top surface and EVSE unit bottom dome baseplate are flushed and parallel to flat ground surface.

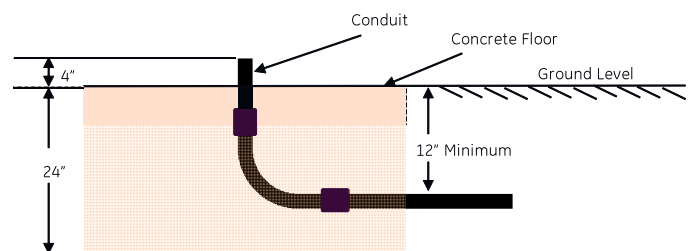


Figure - 1

Step 6 : Using provided template locate the 4 holes. See figure 2 for reference. Template must be Removed after locating the holes

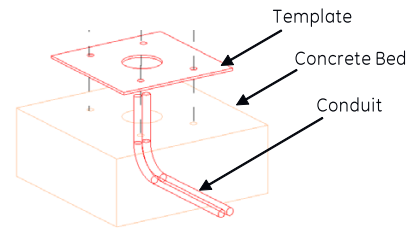


Figure – 2

Step 7: Using a hammer drill and carbide tipped drill bit, drill a hole (1/2" diameter) and at least 5 1/2" to 6" deeper, see figure 3 for reference.

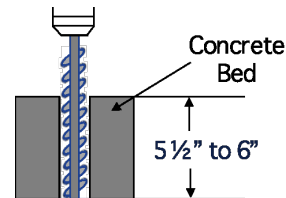


Figure – 3

Step 8: Repeat step 7 for all remaining holes

Step 9: Clean out hole of all debris

Step: 10 Install EVSE unit securely over Concrete bed keeping conduits in center with four 1/2"-6" anchor bolt holes on EVSE baseplate aligned with concrete bed holes. Check local codes to ensure compliance. See figure 4 for reference.

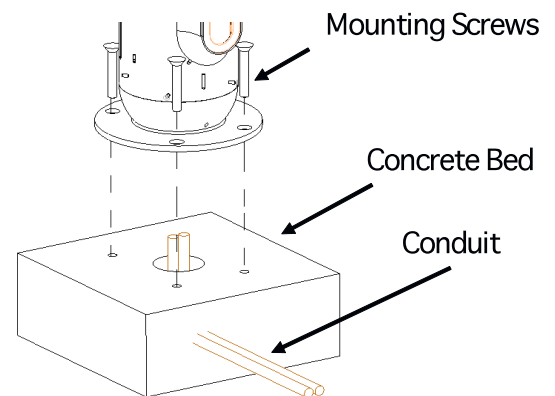


Figure – 4

Step 11: Set the nut flush with the top of the sleeve anchor

Step 12: Insert the sleeve anchor through the EVSE Baseplate into the hole in the concrete base until the washer and nut are tight against the baseplate

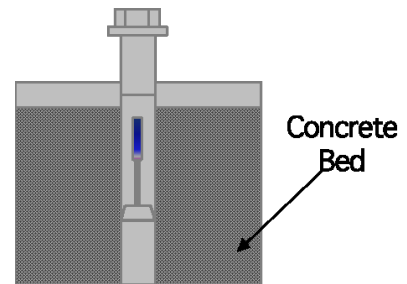


Figure - 5

Step 13: Turn the nut until finger tight

Step 14: Fasten anchor bolts to concrete base, Torque bolts per specification Table 1

Step 15: Use a Wrench to set the sleeve anchor by turning the nut 3 to 4 full turns

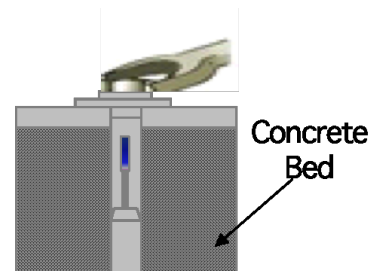


Figure - 6

View after Installation

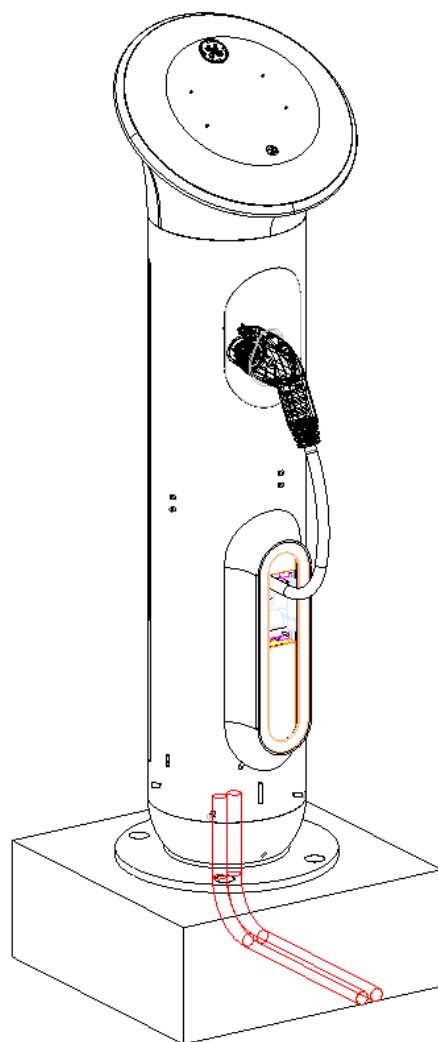


Figure - 7

Step: 16 Open the access door by unlocking the key on back of the EVSE unit (Below Top cover assembly)

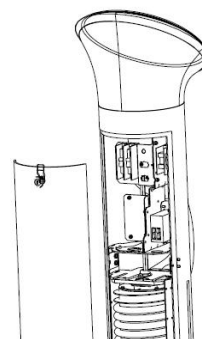


Figure - 8

Step: 17 Route the Power wires and Ground wires as shown in the figure 9

IMPORTANT: WattStation is rated for 208-240V AC, 30Amps, 1 Phase, 60Hz power only. The EVSE must be connected to a centrally grounded system, The ground conductor should be run with power conductors and connected to the equipment grounding lug inside the charger.

Connections to the EVSE are the responsibility of the installer and purchaser, not GE, and such connections must comply with all applicable electrical codes and ordinances. Torque all the nuts as per the torque specification in Table 1, Refer Table 2 for recommended tools.

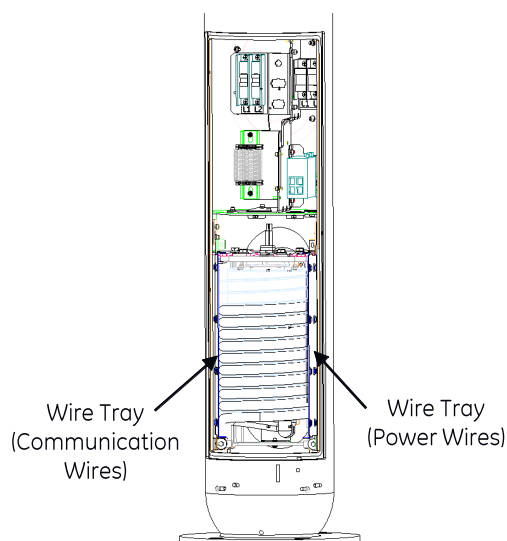


Figure - 9

Step 18: Connect L1 and L2 to the PDB – Power Distribution Block and ground wire to the ground lug shown in Figure 10.

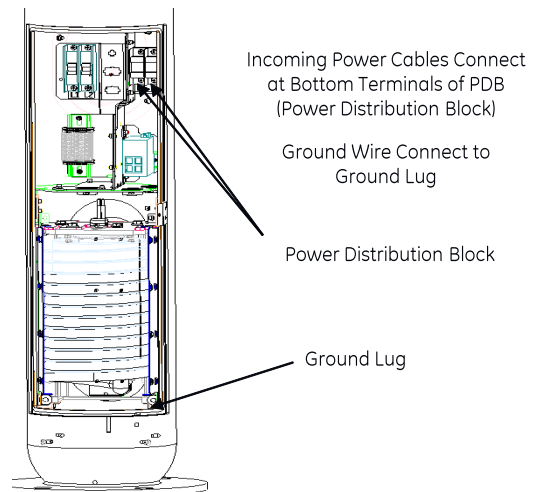


Figure - 10

Step 19: The CAT5 cable is connected to the Ethernet port. It is recommended to run 2 CAT5 cables if there are future or current plans to support communication daisy chaining of GE WattStation Pedestals

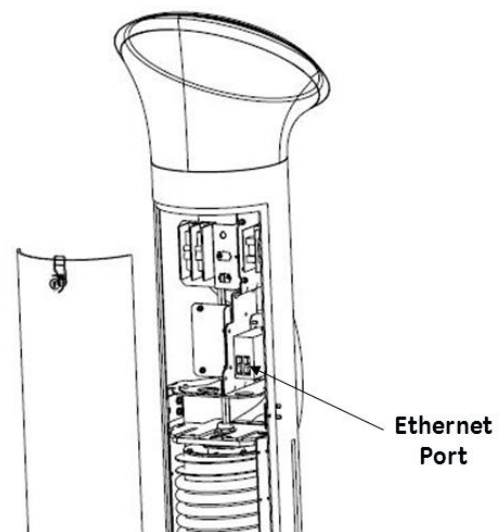


Figure - 11

Cable reel



1. Cable should not be extended beyond the red indicator line at the end of the cable. Pulling beyond this indicator may cause the cable reel to bind, prohibiting retraction.
2. If cable becomes bound due to over-extension, the following steps must be followed to retract the cable before returning to normal operation
 - [2.1] Turn off the power
 - [2.2] Open the access door
 - [2.3] Manually rotate the cable reel in a counter-clockwise direction until the cable is fully retracted.
 - [2.4] Power up the unit as normal, unit can be returned to normal operation

11 Communication

GE recommends that customers planning to use the GE WattStation Pedestal with the cellular option, who want to ensure they will receive adequate coverage, should perform a site survey with a third party, as cellular performance is strongly affected by exact location environment factors and orientation of the pedestal, Figure 12 shows preferred orientations.



General line of sight cellular performance
Figure - 12

12 DuraStation™ Upgrade

Ensure that, no power is connected to the DuraStation unit before the below steps are followed and also refer the DuraStation user manual for detailed instructions.

1. Remove the access door on the back of the DuraStation kiosk unit by pressing the latch button
2. Take out the DuraStation kiosk by removing 1/2" – 13 Nut and 1/2" Star washer as shown in the figure 12.1
3. Take out the kiosk skirt by removing 1/2" – 13 Nut and cut the threaded rods to the concrete bed surface
4. Use the WattStation Pedestal template provided with the package to locate and drill new set of 4 holes (refer step 6 under section 10 in this manual)
5. Cut any conduit outside of center access hole (center of base) 4" above the ground (refer step 5 under section 10 in this manual)
6. Extend power wires and communication wire (if available) by about 18"
7. Follow step 2 and step 7 through step 19 under section 10 as outlined in this manual to complete the installation

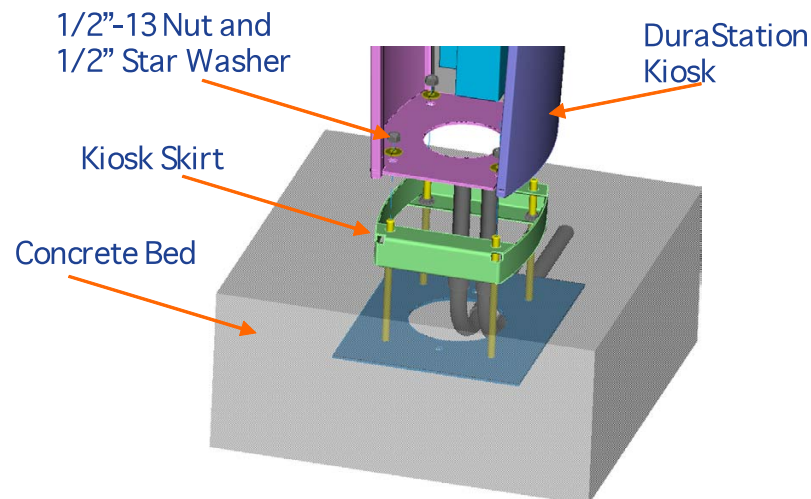


Figure – 12.1

13 LIMITED WARRANTY FOR GE WattStation™ (Pedestal) (“this Warranty”)

WARRANTY

Any one or more of the following actions acknowledges that you have read and agree to the terms of this warranty agreement: Your use of the **GE WattStation (Pedestal)** packaged with this Instruction Manual (the “Hardware”), online product registration of the Hardware, or your return of the enclosed Registration Card. GE’s warranty obligations for this Hardware product are limited to the terms set forth in this Limited Warranty and are limited by and subject to the Exclusions and Limitations set out below.

GE warrants that this Hardware product shall be free of defects in materials and workmanship under normal use for a period of **three (3) years** from the date of manufacture (the “Warranty Period”). If a defect in the Hardware arises and a valid claim is received within the Warranty Period, your sole and exclusive remedy will be for GE, in its sole discretion and to the extent permitted by law, to (1) repair the defect in the Hardware at no charge, using new parts or refurbished parts, or (2) exchange the Hardware with new or refurbished hardware that is functionally equivalent to the original Hardware, (the repaired Hardware and the

exchanged hardware are called the “Remedied Hardware”). Any Remedied Hardware product will be warranted for the remainder of the original warranty period or ninety (90) days from delivery to the customer, whichever is longer. In order to receive the remedy set forth above, you must contact GE during the Warranty Period at 888-437-3765 and provide the model number, serial number and date of purchase. Upon GE’s determination that the Hardware product should be returned to GE, return the Hardware and include with each returned item of Hardware (i) a copy of your original purchase invoice or receipt to verify your warranty; (ii) your name, address, and telephone number; (iii) the Return Materials Authorization (RMA) number.

In addition to the foregoing Hardware product warranty, during the Warranty Period, GE shall also provide telephone (888-437-3765) technical support assistance.

Please note that the above warranty obligations of GE do **not** apply to installation service of the Hardware.

EXCLUSIONS AND LIMITATIONS

This warranty applies only to the Hardware manufactured by or for GE that can be identified by the “GE” trademark, trade name, or logo affixed to it. This warranty does not apply to any non-GE hardware product or any software, even if packaged or sold with the Hardware. Software distributed by GE with or without the GE brand name (including, but not limited to system software) is not covered under this warranty. Refer to the End User Licensing Agreement accompanying the software for details of your rights with respect to its use.

GE does not warrant that the operation of the Hardware will be uninterrupted or error-free. GE is not responsible for damage arising from failure to follow instructions relating to the Hardware’s use.

This warranty does not apply to: (a) consumable parts, such as batteries, or protective coatings designed to diminish over time unless failure has occurred due to a defect in materials or workmanship; (b) cosmetic damage; (c) damage caused by use with non-GE products; (d) damage caused by accident, abuse, misuse, liquid contact, fire, earthquake or other external causes; (e) damage caused by operating the Hardware product outside the permitted or intended uses described by GE; (f) damage caused by service (including upgrades and expansions) not performed by GE, a GE-authorized service provider, an authorized representative of GE, or a qualified electrician; (g) a product or part that has been modified to alter functionality or capability without the written permission of GE; (h) defects caused by normal wear and tear or otherwise due to the normal aging of the product; (i) removed or defaced GE serial numbers; or (j) damage caused by or via the network on which the Hardware product is used including, but not limited to, any online intrusion or attack.

Important: Do not open, take apart or disassemble the Hardware in any way. Doing so may cause damage that is not covered by this warranty. Only GE or a GE authorized service provider should perform service on the Hardware.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL, WRITTEN, STATUTORY, EXPRESS OR IMPLIED. TO THE EXTENT PERMITTED BY APPLICABLE LAW, GE SPECIFICALLY DISCLAIMS ANY AND ALL STATUTORY OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS. IF GE CANNOT LAWFULLY DISCLAIM STATUTORY OR IMPLIED WARRANTIES THEN TO THE EXTENT PERMITTED BY LAW, ALL SUCH WARRANTIES SHALL BE LIMITED IN DURATION TO THE DURATION OF THE EXPRESS WARRANTY PROVIDED IN THIS WARRANTY SECTION AND TO THE REPAIR OR REPLACEMENT SERVICE PROVIDED IN THIS WARRANTY SECTION AND EXCLUSIONS AND LIMITATIONS PROVISION SUB-SECTION, IN EACH CASE AS DETERMINED BY GE.

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WattStation Pedestal Installation Manual

Print one for each EVSE and keep this record in a safe location or inside the corresponding EVSE

*** SAVE THESE INSTRUCTIONS***

The instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the GE Company.

GE Industrial Solutions
41 Woodford Ave.
Plainville, CT 06062

www.geindustrial.com



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